

Title (en)

X-RAY IMAGE TUBE, X-RAY IMAGE TUBE DEVICE AND X-RAY DEVICE

Title (de)

RÖNTGENBILDRÖHRE, RÖNTGENBILDRÖHREINRICHTUNG UND RÖNTGENEINRICHTUNG

Title (fr)

TUBE AMPLIFICATEUR D'IMAGE RADIOLOGIQUE, APPAREIL EQUIPE DE CE TUBE ET APPAREIL RADIOLOGIQUE

Publication

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Application

EP 03715614 A 20030328

Priority

- JP 0303998 W 20030328
- JP 2002092339 A 20020328

Abstract (en)

[origin: US2004208281A1] An object of the present invention is to provide an X-ray image tube which enables acquisition of an image of a proper density by increasing contrast without increasing an irradiation dose of X-rays. The X-rays absorbed or scattered through a subject emit light on an input surface formed in an input window, and the light is further converted into electrons on a photoelectric surface which converts the light into the electrons, accelerated and focused by a focusing electrode, and then guided to an anode side. The electrons guided to the anode side are made visible by a fluorescent substance, and an image of a color is projected on a glass plate with a luminance and a color based on a distribution of the incident X-rays in accordance with the dose of the X-rays.

IPC 1-7

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IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

- [XY] US 3665184 A 19720523 - SCHAGEN PIETER
- [Y] US 5631459 A 19970520 - DE GROOT PAUL [FR]
- [Y] US 5644193 A 19970701 - MATSUDA NAOTOSHI [JP], et al
- [A] US 4647811 A 19870303 - GALVES JEAN-PIERRE [FR], et al
- See references of WO 03083890A1

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

US 2004208281 A1 20041021; **US 7053382 B2 20060530**; CN 1643640 A 20050720; CN 1643640 B 20111123; EP 1489640 A1 20041222; EP 1489640 A4 20090708; EP 1489640 B1 20130717; JP 4116571 B2 20080709; JP WO2003083890 A1 20050804; KR 100729004 B1 20070614; KR 20040111421 A 20041231; WO 03083890 A1 20031009

DOCDB simple family (application)

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